

DOCUMENT RESUME

ED 043 599

24

SP 004 290

AUTHOR Chan, James; Kingsley, Elizabeth
TITLE Evaluation Report of Cooperative Urban Teacher Education Program. Fall 1969. Working Paper, Vol. 3 No. 1.
INSTITUTION Mid-Continent Regional Educational Lab., Inc., Kansas City, Mo.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
BUREAU NO BR-6-2876
PUB DATE Mar 70
CONTRACT OEC-3-7-062876-3070
NOTE 74p.

EDRS PRICE EDRS Price MF-\$0.50 HC-\$3.80
DESCRIPTORS *Course Objectives, *Curriculum Evaluation, Data Analysis, Morale, *Program Evaluation, *Student Attitudes, Student Reaction, *Student Teachers, Teacher Education

ABSTRACT

This report on the operation of the Cooperative Urban Teacher Education Program (CUTE) for the fall semester 1969 is divided into two parts. Part 1 examines the objective data in terms of the hypotheses: 1) On each of the measures taken during the semester, students participating in the program do not change. 2) On each of the measures taken, there is no difference between students who have experienced the program and comparable students who have not experienced it. The conclusion indicated that the objective data obtained reject some of the null hypotheses, but fail to reject others. This means that if other factors were not operating, the program showed some desired effects. Part 2 examines the logs kept by students to record their reactions in order to determine if program objectives have been met or if curriculum adjustments are needed. The objectives include acceptance by the student of feelings about himself and others, and the maintenance of optimum morale. Conclusions indicate that some of the student teachers were influenced in the direction of the objectives, and the need for certain curriculum improvements were suggested. An appendix provides a description of the data collection devices used and a summary of the data. A related document is SP 004 291. (MBM)

ED0 43599

EVALUATION REPORT OF
COOPERATIVE URBAN TEACHER EDUCATION PROGRAM

Fall 1969

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Working Paper, Volume 3, Number 1
March 1970

SP004290

Published by Mid-continent Regional Educational Laboratory, a private non-profit corporation supported in part as a regional educational laboratory by funds from the United States Office of Education, Department of Health, Education, and Welfare under contract number OEC-3-7-062876-3076. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

FOREWORD

The Cooperative Urban Teacher Education (CUTE) program is a 16-week pre-service teacher training program which places emphasis on experiences in the inner-city community. The program, under the direction of Dr. Grant Clothier, is currently being field tested in three locations: the greater Kansas City area; Oklahoma City, Oklahoma; and Wichita, Kansas. Student teachers from approximately 40 colleges and universities in Kansas, Missouri, and Oklahoma are participating in the program.

This report represents a departure from the previous evaluation summaries in that the two semesters for the 1969-70 school year are being reported separately. Also, some changes in methodological procedures have been made in the evaluation, notably in the statistical analysis of the data and the analysis of student-teacher logs.

Many thanks are due the public schools of Kansas City, Missouri and Kansas, Oklahoma City, Oklahoma; and Wichita, Kansas, whose cooperation enabled the establishment of comparison groups.

Special thanks are also due Mrs. Gail Proske and Mrs. Estrid Hess who prepared the manuscript for publication.

James H. Lawson
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PART I

OBJECTIVE DATA

This report is a summary of evaluation efforts for the first semester 1969-70 Cooperative Urban Teacher Education (CUTE) program.

Purpose

The purpose of this evaluation is to assess the effects of the program, and provide recommendations to the program directors based on evidence and information garnered from the evaluation.

It is hoped that students experiencing the CUTE program would evidence: (a) significant change during the semester toward more positive performance on all evaluative instruments administered; and (b) more positive performances on all evaluative instruments administered when compared to a group of students who had not experienced the program.

Hypotheses

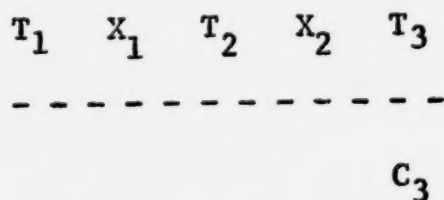
For statistical convenience, these hopes are transformed into null hypotheses. It is generally understood that a null hypothesis can never be accepted by the data obtained; one can reject or fail to reject the null hypothesis. The null hypotheses can be classified in two general categories: (a) On each of the measures taken during the semester, students participating in the CUTE program do not change; and (b) on each of the measures taken, there is no difference between students who have

experienced the CUTE program and comparable students who have not experienced the program.

Design

The design used to collect the data has been used previously in CUTE evaluation efforts. However, it was examined in terms of rival hypotheses available to account for the data this time. The instruments used include: the Rokeach D-Scale, the Teaching Situation Reaction Test (TSRT), the Semantic Differential, the Minnesota Teacher Attitude Inventory (MTAI), and the Cultural Attitude Inventory (CAI). McPEL Interaction Analysis (MIA) classroom observation data were collected also. Except for the MIA data, analyzed essentially the same way as before, descriptive statistics are obtained and the analysis of variance over time and between groups is performed. Since students are not randomly selected, group means are used for the analysis of variance. This is believed to be the appropriate way.

In order to test the hypotheses, a quasi-experimental design is used to collect data. The basic form is diagrammed as follows:



The T's refer to measurements for the CUTE group: T_1 being the first, T_2 , the second, and T_3 , the third. C_3 refers to the measurement of the comparison group taken at about the same time as T_3 . The X's represent the exposure of the CUTE group to a period of the program, the effects of which are to be measured. X_1 represents the first eight weeks, and

X_2 , the last eight weeks. The dashed line indicates that the groups are not equated by random assignment. The first line of the diagram allows the first kind of hypothesis to be tested; the addition of C_3 permits the second kind of hypothesis to be tested.

This design resembles Design 10 in Campbell and Stanley's work. The CUTE design differs in that there is no C_1 and/or C_2 , and the assignment of X to one group or the other is not random.

Campbell and Stanley list 12 factors jeopardizing the validity of various experimental designs.

1. History--specific events occurring between two measurement times in addition to the experimental variable. This factor within the 16-week program is controlled in that there is a comparison group that experiences the same historical events.
2. Maturation--processes within the respondents operating as a function of the passage of time per se (not specific to the particular events), including growing older, growing hungrier, growing more tired, etc. The comparison group, as with the first factor, controls this effect.
3. Testing--the effects of taking a test upon the scores of a second testing. This factor is not controlled.
4. Instrumentation--changes in the calibration of a measuring instrument or changes in the observers or scorers producing changes in the obtained measurements. This factor may possibly occur on the MIA data because observers might change.
5. Statistical regression--operates where groups have been selected on the basis of their extreme scores. This factor does not apply.
6. Selection--biases resulting in differential selection of respondents

for the comparison groups. This factor is likely to occur because students choose to participate in the CUTE program.

7. Experimental mortality--differential loss of respondents from the comparison groups. This does not apply to this design because there is only one measurement from the comparison group.
8. Selection-maturation interaction. This is possible in this case.
9. The reactive or interaction effect of testing--possibility that a pre-test might increase or decrease a respondent's sensitivity or responsiveness to the experimental variable; thus, making results obtained from a pre-tested population nonrepresentative of the effects of the experimental variable for the nonpre-tested universe from which the experimental respondents were selected. This factor may occur.
10. Interaction effects of selection biases and the experimental variable. This factor is possible in this case.
11. Reactive effects of experimental arrangements--preclude generalization about the effect of the experimental variable upon persons being exposed to it in nonexperimental settings. This factor is not likely since the experimental settings are similar to nonexperimental ones.
12. Multiple-treatment interference--likely to occur whenever multiple treatments are applied to the same respondents because the effects of prior treatments are not usually erasable. This factor does not apply because there is only one treatment.

Data Collection

A description of data collection devices and results are presented

in the Appendix.

Data were collected at three locations: Kansas City, Missouri (CUTE 5); Oklahoma City, Oklahoma (Oklahoma CUTE 2); and Wichita, Kansas (Wichita CUTE 2). All data were collected three times during the 16-week training program: the first week (T_1), the eighth week (T_2), and the sixteenth week (T_3).

In the case of the comparison groups, data were collected at about the same time as Kansas City and Wichita T_3 . Comparison group students were student teaching at approximately the same time as the CUTE students; however, not necessarily in the same schools. Nor did comparison group students come from the same colleges or universities. They were, however, primarily practice teaching in inner-city schools. Comparison group-students were volunteers.

Biographical Information

Information about CUTE and comparison group-students was derived from Biographical Data Sheets they each filled out. The following is a summary of this information.

TABLE 1
BIOGRAPHICAL INFORMATION
CUTE AND COMPARISON GROUP STUDENTS

Category	Kansas City CUTE 5 Comparison		Wichita CUTE 2 Comparison		Oklahoma City CUTE 2*
Number	16	15	37	28	22
College Affiliation					
state	6	15	7		19
private					
religious	10		30	28	3
College Size					
Under 500					
500-2000	10		6	28	7
2000 +	6	15	31		15
College location - size of city					
Under 5,000			8		6
5,000 - 25,000	8	7	14		9
25,000 - 100,000	6	2	5		7
100,000 +	2	6	10	28	
Sex					
male	3	3	9	2	4
female	13	12	28	26	18
Type of college					
coeducational	10	14	37	28	22
noncoed	6	1			
Major					
English	3		5	5	
Math	1				
physical ed.			3		
elementary ed.	9	13	15	16	20
history		1	1	2	
social science			2	1	
fine arts			2		
business					

*There were no comparison students in Oklahoma City.

TABLE 1 (continued)

BIOGRAPHICAL INFORMATION
CUTE AND COMPARISON GROUP STUDENTS

Category	Kansas City CUTE 5 Comparison		Wichita CUTE 2 Comparison		Oklahoma City CUTE 2*
Major (cont.)					
home economics			6		
industrial arts		1			
physical sciences			1		
humanities			1		
other	3		1	4	2
Population of hometown					
Under 2,000	1	1	7	4	1
2,000 - 25,000	4	2	11	6	9
25,000 - 100,000	4		8	1	3
100,000 - 250,000	3	2	4	1	
250,000 +	4	10	7	16	9
Size of graduating class					
Under 50	1	1	10	6	3
50 - 200	9	4	16	17	9
200 +	6	10	11	5	10
Head of household--Occupation of 6 years					
unskilled			1		4
semi-skilled	6	5	8		
clerical	4	2		2	
service		2	9	4	9
sales	5	1	2	10	1
professional		5	14	10	6
unemployed				1	
skilled	1		3		2
Occupation of father for 12 years					
unskilled					
semi-skilled			1		
clerical	1		1		
service			1		
sales			1		
professional					

*There were no comparison students in Oklahoma City.

TABLE 1 (continued)

BIOGRAPHICAL INFORMATION
CUTE AND COMPARISON GROUP STUDENTS

Category	Kansas City CUTE 5 Comparison		Wichita CUTE 2 Comparison		Oklahoma City CUTE 2*
Occupation of father for 12 years (cont)					
unemployed					
skilled					
no change	15	15	33	27	22
Preference for placement					
low SES**	6	8	24	3	12
middle SES	10	7	13	23	10
high SES				2	
Career Aspiration					
yes	5	9	21	21	8
no	11	6	16	7	14
Age					
20 - 23	14	8	36	15	16
23 +	2	7	1	13	6

*There were no comparison students in Oklahoma City.

**Social-economical status.

Data Analysis

The computer program FLABMIA 1 was used to process the MIA data. It prints an interaction matrix in percentage and calculates several indices for each teacher and for each group.

For other objective data computer programs, FLABCTAB, SES MEANS, and ANOVA were used. FLABCTAB prints descriptive statistics for each scale; SES MEANS punches means by SES preference on cards for the analysis of variance; and ANOVA outputs the analysis of variance table.

The following is an example of the tables obtained:

TABLE 2

ANALYSIS OF VARIANCE OF DIFFERENCES BETWEEN TIME 1 AND TIME 3
CUTE STUDENTS' MEAN SCORES ON TEACHER SITUATION REACTION TEST

SV	SS	DF	MS	F
Time	69.50278	1	69.50278	2.06250
Unit	581.85010	5	116.37002	
Error	168.49150	5	33.69830	
Total	819.84438	11		

TABLE 3

ANALYSIS OF VARIANCE OF DIFFERENCES IN MEAN SCORE BETWEEN CUTE STUDENTS
AND COMPARISON STUDENTS ON TEACHER SITUATION REACTION TEST

SV	SS	DF	MS	F
Treatment	675.43359	1	675.43359	0.75458
SES Preference	3048.66846	1	3048.77846	3.40591
Treatment X SES Preference	1553.75879	1	1553.75879	1.73583
Residual	3880.44482	4	895.11120	
Total	8858.30566	7		

Results

McREL Interaction Analysis. (for figures see p. 42 to p. 45)

1. Percentage of teacher talk

CUTE students have lowered the percentages of teacher talk by the end of training; these percentages were lower than those of the comparison group students, although differences were not large.

2. Regular I/D ratio

I/D ratios of CUTE students at each site increased at Time 2 and then fell at Time 3. At Time 3 there was not much difference be-

tween CUTE students and comparison group students.

3. Revised i/d ratio

The revised i/d ratios of the CUTE students decreased and were lower than those of the comparison group students.

4. Percentage of student talk

Percentages of student talk for the CUTE groups increased during training. Compared to those of the comparison group at each site, CUTE group percentages of student talk were higher at Kansas City and lower at Wichita.

5. Percentage of category 9: student initiates talk

At Kansas City and Wichita sites, the CUTE student percentages increased but were not much different from those of comparison group students. At Oklahoma City, the CUTE student percentages were much higher than those of the other two sites but they decreased each time.

6. Percentage of category 10: constructive activity without distinct observable interaction

At Wichita and Oklahoma City percentages increased; at Kansas City percentages decreased. Furthermore, there were differences among the three sites.

7. Percentage of category 11: disruptive silence or confusion

The percentages for the CUTE groups increased and were higher than those of the comparison groups.

8. Percentage of category 12: different pupil talking following a first student speaker

At Kansas City and Wichita, CUTE students' percentages increased,

but were not much different than those of the comparison groups.

The percentages for the Oklahoma CUTE students decreased.

The Rokeach D-Scale. The differences over time and between groups were not significant. (For figures see pp. 46 & 47)

Teaching Situation Reaction Test. The differences over time and between groups were not significant, except between Time 2 and Time 3, significant at .025* level. (For figures see p. 49)

Semantic Differential. (For figures see p. 50 to p. 64)

1. Teachers--evaluation

The differences over time and between groups were not significant.

2. Teachers--potency

The differences over time and between the CUTE groups and the comparison groups were significant at .05 level, except between Time 1 and Time 2 which was not significant.

3. Teachers--activity

The differences over time and between groups were not significant.

4. Principals--evaluation

The differences over time and between groups were not significant.

5. Principals--potency

The differences over time and between groups were not significant.

6. Principals--activity

The differences over time and between groups were not significant.

7. Pupils--evaluation

The differences over time and between groups were not significant except between Time 1 and Time 2, significant at .025 level.

*The smaller the figure the more significant the difference.

8. Pupils--potency

The differences over time and between groups were not significant except between Time 1 and Time 3, significant at .05 level.

9. Pupils--activity

The differences over time and between the CUTE groups and the comparison groups were significant at .05 level, except between Time 2 and Time 3 which was not significant

10. Grading--evaluation

All the differences over time and between the CUTE groups and the comparison groups were significant at .05 level, except between Time 2 and Time 3 which was not significant.

11. Grading--potency

The differences over time and between groups were not significant except between Time 2 and Time 3 which was significant at .025 level.

12. Grading--activity

All the differences over time and between the CUTE groups and the comparison groups were significant at .01 level, except between Time 2 and Time 3 which was not significant.

13. Lecturing--evaluation

The differences over time and between groups were not significant except between Time 1 and Time 2 which was significant at .025 level.

14. Lecturing--potency

The differences over time and between groups were not significant except between Time 1 and Time 2 which was significant at .10 level.

15. Lecturing--activity

The differences over time and between groups were not significant

except between Time 1 and Time 2 which was significant at .05 level.

16. Class Discussion--evaluation

The differences over time and between groups were not significant except between Time 2 and Time 3, significant at .005 level.

17. Class Discussion--potency

All the differences over time and between groups were not significant.

18. Class Discussion--activity

The differences over time and between groups were not significant, except between Time 1 and Time 2 which was significant at .05 level.

19. Public Schools--evaluation

The differences over time and between groups were not significant except between Time 1 and Time 2, significant at .025 level.

20. Public Schools--potency

All the differences over time and between groups were not significant.

21. Public Schools--activity

The differences over time and between groups were not significant except between Time 1 and Time 2, significant at .05 level.

22. My Teaching--evaluation

All the differences over time and between groups were not significant.

23. My Teaching--potency

The differences over time and between groups were not significant except between Time 1 and Time 2, significant at .10 level.

24. My Teaching--activity

The differences over time were not significant. However, the difference between the CUTE groups and the comparison groups was significant at .005 level.

25. Volunteer--evaluation

All the differences over time and between groups were not significant.

26. Volunteer--potency

All the differences over time and between groups were not significant.

27. Volunteer--activity

The differences over time and between groups were not significant except between Time 2 and Time 3, significant at .01 level.

Minnesota Teacher Attitude Inventory. The difference between the CUTE groups and the comparison groups was not significant. For the CUTE groups, the difference between Time 1 and Time 2 was significant at .005 level; between Time 2 and Time 3, at .05 level. However, between Time 1 and Time 3 it was significant at .10 level. This means that their mean scores rose between Time 1 and Time 2 and then dropped between Time 2 and Time 3. (For figures see p. 65)

Cultural Attitude Inventory (For figures see p. 66 to p. 68)

1. Knowledge score

The differences over time and between groups were not significant, except between Time 1 and Time 2 which was significant at .10 level.

2. Attitude score

The difference between the CUTE groups and the comparison groups was not significant. For the CUTE groups, the difference between Time 1 and Time 2 was significant at .005 level; between Time 2 and Time 3, at .05 level. However, between Time 1 and Time 3 it was not significant. This means that their mean scores rose between Time 1 and Time 2 and then dropped between Time 2 and Time 3.

3. Total score

The difference between the CUTE groups and the comparison groups was not significant. For the CUTE groups, the difference between Time 1 and Time 2 was significant at .005 level; between Time 2 and Time 3, at .025 level. However, between Time 1 and Time 3 it was not significant.

Discussion

In this study: (a) the full control over scheduling of experimental stimuli (the when and to whom of exposure and the ability to randomize exposures), which makes a true experiment possible, was lacking, and (b) the scheduling of data collection procedures (the when and to whom of measurement), which makes a quasi-experiment possible, was not under full control.

The interpretation of data was made difficult because the subjects in the CUTE groups and comparison groups were volunteers and the number of groups was small (therefore the number of degrees of freedom was small). Thus, it is questionable whether statistical inferences based on randomization can be applied to this case. Furthermore, data interpretation was made more difficult since the three sites differed in the conduct of the program, the training of observers, and the selection of comparison students.

There were some limitations to the indices used in the McREL Interaction Analysis: (a) the percentage of student talk did not include category 12, defined as different pupil talking following a first student speaker; and (b) the revised i/d ratio, indicating whether the teacher is direct or indirect in motivation and control, is calculated without categories 4 and 41, questioning and probing, which can be and possibly are used also for motivation and control by teachers.

Conclusion

Keeping in mind the plausible rival hypotheses previously mentioned, the objective data obtained reject some of the null hypotheses, but fail to reject others. This means that, if other factors were not operating, the program showed some desired effects.

Recommendations

1. To aid in data interpretation, it is recommended that the three sites conduct the CUTE program uniformly.
2. Another way to make the data more interpretable would be to collect data from comparison students at Time 1.
3. According to the evaluation results from previous semesters, the Rokeach D-Scale does not appear to be sensitive to change; therefore, its use should be discontinued.
4. Students should be given cases like those in the Teaching Situation Reaction Test to think about and discuss.
5. Indirect teacher influence should be emphasized; this includes categories 1, 2, 3, 4, and 41 of the MIA.
6. Few tallies were entered for MIA category 41, asking probing questions. This indicates that either student teachers did not show this behavior or the observer did not record it. Since category 41 is an important program objective, the situation needs to be improved. It is recommended: (a) this behavior be emphasized; and (b) categories 4 and 41 be redefined or observers be retrained.
7. Sociological knowledge similar to that tested in the Cultural Attitude Inventory should be emphasized more.
8. On most instruments students' mean scores rose between Time 1 and 2,

then dropped between Time 2 and Time 3. This seems to indicate that cooperative teachers need to be better acquainted with the CUTE program so they may better assist student teachers.

9. It is recommended that the Semantic Differential be altered by dropping the Potency and Activity scales and deleting or changing some of the topics. The two scales are hard to interpret or may even be irrelevant. The topics Principals, Volunteer, and Public Schools are not sensitive to change, and it is suggested that Psychology Seminar, Sociology Seminar, and Teacher Education Seminar be used instead. Also to make the topics more explicit, Teachers and Grading should be changed to Teachers in general and Grading pupils.

PART II

STUDENT LOGS

Student logs are kept by all student teachers in the CUTE program. These logs are recordings of student-teacher reactions to experiences encountered during the 16-week program.

Purpose

The student logs provide the CUTE instruction and evaluation staff with student-teacher reactions to the program during a particular semester. This information is used by the staff to determine if program objectives have been met or if adjustments in curriculum are needed.

Determining if mental health objectives have been reached is of primary interest. Objectives include: (a) The student teacher accepts and makes efforts to resolve feelings about himself and others, and (b) the student teacher maintains an optimal morale.

CUTE students are instructed to make daily recordings of any emotional reaction to persons and events. Logs are collected at the end of the term after all seminar or student-teaching requirements have been completed and college credits recorded. In analyzing the logs, every effort was made to retain the spirit and literal meaning of all recordings.

Method and Results.

In preparing this analysis, all written reports from Kansas City, Missouri (CUTE 5), Wichita (CUTE 2), and Oklahoma City (CUTE 2) were read to establish a "feel" for the information. Since some of the data gathered from student teachers at these three sites were not recorded according to instructions, limitations were imposed upon the type of

analysis that could be applied. The logs of the 16 Kansas City student teachers were kept according to the instructions, but Wichita and Oklahoma City submitted reports that either were not a daily response sequence or were incomplete.

Only ten student teachers from Oklahoma City submitted written reports. Of these, four were logs or partial logs and six were summary reports at the end of the term of personal reactions to the program. They indicated three areas of concern: (a) CUTE curriculum, (b) attitudes toward staff members, and (c) relationships with and interpretations of the inner-city pupil.

Student teachers in Wichita were directed to write a brief weekly report of their teaching concerns. Thirty-four written reports were submitted.

Since a more comprehensive analysis could be given to the Kansas City logs, they form the major source of organization for this report. Information from these logs was categorized in three classifications: (a) student teacher characteristics, (b) group and individual emotional responses, and (c) general reactions to the program. Since data from Wichita and Oklahoma City do not fit all these classifications, they are reported under appropriate sections.

Kansas City Student Teacher Characteristics

Method:

The logs were examined for statements regarding four student-teacher characteristics: personal resourcefulness, acceptance of others feelings, efforts to resolve conflicts, and teacher-pupil relations. Characteristics

were determined from program objectives. That student teachers be competent individuals, capable of interacting with the pupils, and understanding classroom behaviors are among the major objectives of the program. The previously mentioned mental health objectives include being sensitive to the feelings of others and dealing constructively with conflict.

The first three classifications describe abilities possessed by the student teacher. The criteria by which statements were categorized are given in the definitions below:

1. Resourceful--any statement indicating that the student teacher incorporated different approaches, techniques, and equipment in lesson plans.
2. Accepts feelings--any statement in which feelings of others were accepted.
3. Resolves conflicts--any statement demonstrating personal involvement in resolving conflict.

The fourth category, relationships between student teachers and pupils, was subdivided into three groups: classroom control, interaction in the classroom, and student-teacher empathy for pupils.

With respect to classroom control, the student teacher was rated "confident," "varied," or "uncertain." If, from the beginning of the actual teaching experience, the student teacher felt in control, he was considered "confident." If, throughout the term, the CUTE student expressed anxiety in handling classroom discipline, he was rated "uncertain." The "varied" rating describes those persons who fluctuated between certainty and uncertainty.

In categorizing classroom interaction, a classification of "emphasized" was applied when the student teacher emphasized in his classroom planning

teacher-pupil interaction. If he described classroom events where teacher-pupil interaction could have taken place, he was rated as "possibly" having classroom interaction.

If, throughout the log, expressions of care and understanding of pupils was made, the teacher was placed in the category "empathy." The only feeling expressed by some student-teachers was that they would miss their pupils. Table 5 summarizes the student-teacher relationships with pupils.

Results:

An explanation is needed to preface these results. Although the CUTE students were instructed to record feelings about persons and events, this was not mandatory. Instructions were general enough to allow comments about any encounter student teachers deemed noteworthy. Certain individuals consistently noted concern about relationships with and feelings for peers and authority figures; therefore, they made little or no comment about classroom events or involvement. Because there were some students whose comments did not fit any of the teacher description categories, all students are not represented in the Table 5 classification.

Table 4 summarizes the characteristics of the Kansas City CUTE students. Sixty-nine percent of the 16 student teachers incorporated into their classroom presentations different techniques and methods learned from CUTE seminars or other courses. They described how they used demonstrations, laboratory work, and audio-visual equipment in class activities. Most students indicated an ability to accept feelings of other people. Only 50 percent, however, described efforts they actually made to resolve conflicts.

A summary of CUTE student-teacher relationships (see Table 5) with pupils reveals that 31 percent of the student teachers wrote confidently of their classroom control; 38 percent fluctuated between feelings of confidence and uncertainty; and one person felt discipline to be such a problem that she did not wish to continue teaching. Thirty-one percent of the student teachers made conscious efforts to develop classroom activities that would require teacher-pupil interaction. Forty-four percent mentioned activities that possibly could have permitted teacher-pupil involvement. Fifty-six percent of the student teachers expressed empathy for pupils. Two students stated at the end of their log that they would miss the children.

TABLE 4

PERSONAL CHARACTERISTICS OF KANSAS CITY CUTE STUDENTS

Characteristics	N	%
Resourceful	11	69
Accepts feelings	13	81
Resolves conflicts	8	50

TABLE 5

KANSAS CITY STUDENT TEACHER RELATIONSHIPS WITH PUPILS

Relationships with Pupils	N	%
<u>Control</u>		
Confident	5	31
Varied	6	38
Uncertain	1	6
<u>Interaction</u>		
Emphasized	5	31
Possibly interacted	7	44
<u>Empathy</u>		
Has empathy	9	56
Will miss pupil	2	12

Wichita Student-Teacher ConcernsMethod:

The Wichita reports were analyzed in terms of particular teaching concerns. The degree of emphasis given each area of concern was noted. The magnitude of emphasis for these categories was determined by the percentage of student teachers commenting about a particular area. Changes in magnitude (percentage of teachers commenting) for the two periods were examined. Responses recorded during the two periods of the program, observing and practice teaching, were examined for similarities and differences in area stressed by the student teacher.

Results:

Teaching concerns expressed during both the classroom observations and student teaching periods are listed below, with defining statements determined from student-teacher expressions.

1. Relevant teaching--gearing teaching materials, ideas, and methods to pupil needs and interests. Helping the student to relate subject matter to personal experiences was also emphasized.
2. Discipline--classroom management and control. This includes: finding the balance between a friend and an authority, managing classroom discipline without stifling self-expression, and being consistent and fair in disciplinary actions. The student teachers were interested in dealing constructively with aggressiveness and encouraging the children to develop more self-control and self-responsibility.
3. Preparation--developing well-organized unit plans to produce efficient teaching and improve communication of ideas.
4. Motivation--student teachers desired to help inner-city pupils enjoy learning activities and see the value of learning. CUTE students expressed a desire that pupils not only be teacher-motivated but self-motivated, as well.
5. Understanding inner-city pupils--the student teachers stressed developing a sensitive understanding of the needs, background, and feelings of individuals in the classroom.
6. Student-teacher adequacy--concerns centered around personal educational deficiencies and limitations in communicative abilities. The need to be sensitive to their own attitudes, apprehensions, and prejudices and to develop self-confident, positive attitudes were listed.

Although all the above categories were listed by the student teachers during observation and practice-teaching periods, the degree of emphasis given to each varied with the type of teacher involvement. During classroom observation, at least 50 percent of the student teachers listed the first four categories as major areas of concern. The most frequently cited category during this period, however, was developing relevant teaching units and approaches. Sixty-eight percent listed this as an area

to be stressed. For the last eight weeks, only 30 to 45 percent expressed concern for preparation, teaching relevancy, and pupil motivation. During this student-teaching period, discipline became the most dominant issue, with 60 percent recording feelings and attitudes about classroom management.

About 40 percent of the student teachers wrote about their own personal adequacy and need for pupil awareness during the observation period. In the last portion of the term when they were practice teaching, the percentage dropped to 27.

Defining a role as a student teacher was stressed only during the first portion of the term. Approximately 25 percent mentioned this as a problem. During the last portion of the term there were no explicit statements that indicated student teachers were having problems with role. This particular category is the only issue unique to one of the two periods analyzed.

Oklahoma City student teacher concerns

Method:

Oklahoma City student-teacher reports emphasized primarily their concern for the classroom pupils. The following summary of their comments demonstrates these concerns.

Results:

The CUTE students described the style of living observed for the inner-city pupil. These include: Protective concern for members of their immediate and extended families, older children taking responsibility for the younger ones, little or no sibling rivalry, and resolution of problems by physical fighting. Parent-child relationships were

reflected in the statements (a) many children appeared to use the classroom and teachers as a supportive environment for learning purposes as well as emotional growth (much the way middle class children use home and parents); (b) parental involvement in school activities and achievement was quite limited or in many cases totally lacking; and (c) few parents came with the elementary children to enroll.

Student-teachers further commented that though the vocabulary of these children is limited "their ability to describe a situation accurately is remarkable." They are quite honest about how they perceive others. One teacher commented that the children showed more creativity and enthusiasm about learning than she had anticipated.

Group and Individual Emotional Responses

Emotional responses for individual student teachers and trends for the group, as reflected in the logs of the Kansas City student teachers, are summarized. High and low peaks of emotional experiences (stress and elation) during the program are given. Where possible, some determining factors for these emotions are offered.

For the group one emotional response of the Kansas City students was to cluster into two fairly well-defined social sets, with the exception of one student teacher who was a loner and a few individuals fluctuating between the sets. There were distinct differences noted in the log content of these two groups (set 1 and set 2).

Set 1 wrote primarily of their personal likes or dislikes for other people, issues, or teaching techniques. Data in these logs were not as descriptive or detailed as the other set's data. Also, there appeared to be a larger degree of emotional dependence between certain members in

Set 1. Set 2, though recording personal reactions, appeared more task-oriented, emphasizing planning, organizing, and incorporating new ideas and techniques into their teaching.

High and low peaks of emotional expression were observed for the total group in Kansas City during the semester. The greatest amount of group frustration and depression occurred between mid-September and the end of the month. On September 17 one of the black student teachers was not admitted because of race to the apartment of a white student teacher. Most CUTE students expressed resentment and concern that this happened. On September 24 a committee of CUTE students met to discuss the matter with representatives of the Human Relations Board and administrators of the apartment building. As a result of the meeting, the black student teacher was admitted as a guest.

On September 25, the temporary withdrawal of one male CUTE student, a leader in set 1, created much concern for the whole group. Several from both sets expressed feelings of anxiety and depression at this time.

Another matter of concern for the whole group was the lottery drawing for the draft on December 1. Female student teachers were anxious about boy friends being drafted and disruption of future plans.

The group experienced periods of elation as Thanksgiving and Christmas holidays approached. Group excitement also was noted prior to any social event.

Particular incidences causing concern for individual student-teachers are contained in the following list:

1. Getting settled in an apartment
2. Finding way around the city
3. Meeting cooperating teacher

4. Establishing credit and financial security
5. Being confined all day in the CUTE school where classes were held
6. Facing teaching or "flanderization" for the first time
7. Running out of material during a classroom presentation
8. Discipline problems in the classroom
9. Facing micro-teaching responsibility
10. Lack of feedback from staff and cooperating teachers
11. Uncertainty about future responsibilities, expectations, and events
12. Overwhelming amount of work
13. Fatigue
14. Sunday night depression when facing the next week
15. Lengthy sociology test
16. Physical illness (colds and viruses)
17. Personal problems with boyfriends, girlfriends, and parents
18. Certain peer behaviors
19. Disunity in the group
20. Visit to one of the inner-city bars
21. Completing assignments on time
22. Rioting at one school

Certain student teachers expressed feelings of elation when these events occurred:

1. When all went well while being "flanderized"
2. When micro-teaching went well
3. When they had a pleasant relationship with their cooperating teacher
4. When poor students excelled in a laboratory experiment
5. When students organized their studies and performed well during video taping
6. When classroom discussions went well
7. When a new teaching technique was tried and proved successful
8. If a discipline problem was handled so it resulted in a positive effect
9. When a parent expressed appreciation for help his child received
10. When the classroom gave a surprise party at the end of the term
11. When an engagement ring was received

General Reactions to Experiences during the CUTE Program

CUTE students' general reactions throughout the program to the curriculum, staff, various speakers, trips to the inner city, and visits to schools and boards of education were examined. Information from the Kansas City and Oklahoma City student logs is summarized in these reactions.

Positive reactions--Kansas City

1. Most Kansas City CUTE students expressed an appreciation for the staff's apparent commitment to their work and expressions of concern for the well-being of the CUTE student.
 - (a) Students particularly appreciated the insights gained from education teachers;
 - (b) CUTE students liked the way the sociology instructor geared classes to permit inner-city involvement;
 - (c) regarding staff psychiatrists, one person stated, "It really helped just to talk. It was amazing that they would take time and energy to listen to us."
2. Kansas City CUTE students positive responses to the curriculum were:
 - (a) Micro-teaching helped to sensitize them to their own teaching mannerisms and handling of certain teaching techniques;
 - (b) specific teaching techniques, such as probing, reinforcement, closure and establishing set were considered to be practical aids in planning and conducting classes;
 - (c) role-playing was seen as an effective technique for demonstrating prejudice; and
 - (d) psychology seminars were considered as an opportunity to compare information about classroom experiences with other student teachers. (One person described the seminar as "the most enlightening part of the interaction in CUTE.")
3. The CUTE staff in Kansas City planned numerous trips into the inner city to help student teachers learn something about inner-city people, their style of living, attitudes, and desires, and the organizations serving these people. All these trips, which included visits to the school boards, junior and senior high schools, mental health laboratory,

and inner-city housing projects, were considered beneficial.

4. Most CUTE students felt that dressing as low-income people and seeking apartments in the inner city helped them learn much about the school district and living conditions.
5. All student teachers reported positive feelings about tutoring in the community centers. Some reported that students were especially eager to learn.

Negative reactions--Kansas City

1. At certain times all student teachers desired more information about staff expectation and faster feedback from staff and cooperating teachers concerning tests, assignments and classroom performance. Some felt that certain tests given during the term were unfair because of length and type.
2. CUTE students voiced some negative reactions to the curriculum:
(a) Lectures were too theoretical and lacked information about practical matters; (b) students often felt ill-equipped to manage some classroom behavioral problems and wanted more discussion on this subject; and (c) several student teachers initially expressed uneasiness and frustration because of the unstructured psychology seminars.
3. Regarding speaker representatives of radical inner-city groups, most CUTE students agreed with some of the ideas expressed, but felt for the most part that the solutions for problems presented by these organizations were too extreme and would ultimately create the very thing they opposed.
4. Some of the CUTE students resented personnel at one of the community

centers. The personnel was considered to be harsh and unrealistic in demands they placed upon the children and student teachers.

Positive reactions--Oklahoma City

1. Student teachers felt that the sociology instructor's discussions on racial problems and black heritage encouraged them to be more perceptive of ghetto children's needs; ideas and reactions from the education teacher were instructive and helpful in class planning; and the staff psychologist created a feeling of openness and honesty in the seminars.
2. Student teachers felt micro-teaching and role-playing to be beneficial techniques for improving classroom preparation and discussion.
3. Most CUTE students had positive reactions to the psychology seminars.

Negative reactions--Oklahoma City

1. Student teachers wanted more seminar discussion about classroom management and discipline.
2. Many felt the amount of work required in seminars and community centers was too time-consuming.

Student-teacher Attitudinal Changes Toward the Program in Kansas City

1. In measuring attitudinal changes toward the CUTE program by student teachers, reactions at the beginning and end of the term were rated as positive, neutral, doubtful, or fearful expressions. Of these reactions the first three are independent; fear is not. Since fear was most frequently associated with positive responses (Table 6), the first example is given as a combination of both positive and fearful response.

Positive and Fearful

"I'm glad we spent the afternoon getting to know one another and

discovering others felt as I did and had some of the same fears.....

Tonight I'm enthused, excited, and scared. I have a place to live and we found out all the stuff we get to do."

Neutral

"The picnic. . .was a good opportunity to 'break the ice' and get to know the others in the program. . .We took the McREL Battery this morning. . .The awareness session helped to break the ice, but that was about all."

Doubtful

"I have waited until tonight to start my log. One of the reasons is that I finally feel somewhat at home. . .What the future has in store, I really don't know. All I know is that without my fiance's encouragement and discouragement, I would not be here now."

2. Responses given at the end of the program (Student teachers' expressions at the end of the program were only positive or neutral.)

Positive

"This was the best semester of my college years. For once I enjoyed what I was doing. . .I think I learned more in the last four months than I learned in my three previous years of college. . .What I learned came from the people I was with, but mostly from my students. My students were my real teachers."

Neutral

"It was an O.K. experience, but I'm glad it's the end."

TABLE 6

KANSAS CITY STUDENT-TEACHER ATTITUDES
AT THE BEGINNING AND END OF THE PROGRAM

	N	%
<u>Beginning</u>		
Positive	8	50
Neutral	7	44
Doubtful	1	6
*Fearful	5	31
<u>End</u>		
Positive	11	69
Neutral	5	31
Doubtful	--	--
Fearful	--	--

*Dependent category--4 students responded in conjunction with Positive; 1 with Doubtful.

Fifty percent of the 16 student teachers expressed positive feelings at the beginning of CUTE and wrote of their enthusiasm to become involved in inner-city life and education. At the end of the term, 69 percent expressed regret over leaving the teaching experience and/or expressed an appreciation for this educational opportunity.

At the beginning, 44 percent wrote in rather matter of fact or "neutral" terms; whereas 31 percent recorded "neutral" feelings at the end. Thirty-one percent of the 16 student teachers expressed feeling of apprehension and fear over anticipated future experiences. At the begin-

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ning of the program, one student teacher doubted whether she wanted to become involved.

Conclusions

From the data contained in the student logs, it can be concluded that some of the student teachers were influenced in the direction of program objectives. The need for certain curriculum improvements is suggested.

Data indicated that most student teachers in Kansas City had made efforts to use innovative teaching techniques and accept the feelings of others. Most students indicated that much of the time they felt confident in classroom control and tried to permit pupils to enter into classroom activities and discussions.

More student teachers had a positive impression of the CUTE experiences at the end of the program than at the beginning. Responses to the curriculum both in Kansas City and Oklahoma City mostly were favorable; nevertheless, students' primary complaint was that the curriculum did not include enough practical information about classroom management, particularly discipline.

The major problem area mentioned by the student teachers in all sites was discipline. Initially, Kansas City and Oklahoma City CUTE students expressed a desire that the psychology seminar be more structured. Trips into the inner city were considered an important dimension of the program in Kansas City.

Limitations. For research purposes, this analysis was limited because information from the three sites was not collected in the same manner, and all student teachers did not comment upon some areas of

interest for the program. Many student teachers offered no suggestions for improvement of the CUTE program.

Recommendations based on analysis of data

1. Limitations on research could be remedied if all three sites collected the data in the same way. If logs are to be used and examined according to program objectives, student teachers should be given more explicit instructions, making them aware of areas of concern and encouraging them to be more conscientious with their recordings.
2. Feedback about classroom and personal performance, particularly from the cooperating teacher, would be beneficial to the student teacher. The cooperating teacher needs to be informed of program objectives.
3. The student teacher should be exposed to instructional concepts and techniques that are practical and applicable to inner-city classrooms.
4. Since discipline in the classroom is a major problem in all three sites, an effort to study the situations and determine causal factors would be appropriate: (a) Do student teachers need to improve lesson preparations, presentation of themselves or materials, or their understanding of child behavior and means of coping with these behaviors; (b) is it simply a matter that time and experience will resolve; (c) is pupil behavior a result of weaknesses within the school systems, poor home and communication environment, or personal emotional or physiological problems; (d) if so, how can this behavior be modified; and (e) how can the total environment be modified to help the child and assist the learning process.
5. Perhaps, the psychology seminars could be given more structure by incorporating purposeful activity to increase student teacher sensitivity to their own personal characteristics, as well as to those of the inner-city child. Studied efforts to understand classroom management and behavior is in order, if for no other reason than to assist the student teacher to set realistic expectations.

Suggestions by Kansas City and Oklahoma City CUTE Students

1. Encourage the cooperating teachers to give more feedback.
2. Provide identification cards for CUTE students.
3. Assist student teachers in establishing credit and cashing checks.
4. Advertise CUTE more vigorously in the universities.

5. Schedule staff interviews so that each student teacher gets an equal amount of time and there is no waiting period.
6. Schedule meetings with the boards of education later in the term so student teachers will be better prepared to ask questions.
7. Provide the student teacher with individual attention in certain areas, especially during the first eight weeks.
8. Provide more opportunities for staff and student teachers to relate socially.
9. Make all seminars or sessions mandatory.
10. Exclude married people who cannot commit themselves fully to the program.
11. Form partnerships with at least three CUTE students for the purpose of sharing daily experiences.
12. Screen student teachers prior to and during the program.
13. Perform a follow-up study on all aspects of the CUTE students' performances.
14. Give the student teacher a freer hand in teaching experiences.
15. Deal with specifics of classroom interactions rather than generalities.
16. Provide more variety in scheduling. Staying at the same place all day after having adjusted to college life can become quite boring.
17. Separating elementary and secondary student teachers is not desirable for all seminars.
18. Provide the student teacher with more information about the McREL Interaction Analysis.
19. Have a workshop of simulated classroom situations with experienced teachers reacting to realistic problems. This would familiarize the student teacher with usual and unusual situations and encourage confidence should similar problems occur during practice teaching.

A P P E N D I X
Description of Data Collection Devices
and
Summary of Data

McREL Interaction Analysis

The McREL Interaction Analysis is a modification of Flanders' ten category teacher-pupil interaction system. During the 1967-68 school year, several additional categories were added to the Flanders' categories.

The verbal balance in this modified system is divided into two major categories: student talk and teacher talk. In addition, teacher talk can be classified as direct or indirect. A teacher's direct statements minimize the freedom of the student to respond; whereas, a teacher's indirect statements maximize the freedom of the pupils to respond.

Analysis of the first year's data indicated that some categories were not discriminating adequately among pupil-teacher classroom behaviors, as a result these categories were not included in subsequent data collections. Other categories were changed to improve future data collections.

Two categories were added during the 1968-69 school year; current categories are:

1. Teacher accepts feeling.
2. Teacher praises or encourages pupil.
3. Teacher accepts, clarifies, or uses ideas of pupils.
4. Teacher asks a question.
41. Teacher asks a series of probing questions.
5. Teacher gives information or lectures.
6. Teacher gives directions to pupils.
7. Teacher criticizes or justifies authority.
8. Pupil responds to teacher initiated questions.
81. Pupil read aloud teacher assignment.
9. Student initiates talk.

10. Constructive activity without distinct observable interaction.
11. Disruptive silence or confusion which does not direct activity to an acceptable learning objective.
12. Different pupil talking following a first pupil speaker.

The use and interpretation of this data collection for CUTE project evaluation is based on the general assumption that indirect verbal teaching behavior is more desirable than direct verbal teaching behavior.

Percentages of time student teachers and pupils talk, the I/D ratio, the revised i/d ratio, and the percentages of time recorded in categories 9, 10, 11 and 12 were calculated.

The I/D ratio reflects the relative number of indirect and direct teacher statements. An I/D ratio of .33 means that for every two direct statements there was only one indirect statement. The revised i/d is calculated without categories 4, 41, 5, lecturing and questioning, and indicates whether the teacher is direct or indirect in motivation and control.

Observers were trained in 30-40 hour training sessions and intra-rater and/or inter-rater reliabilities of .85 were desired for each observer. (Scott's coefficient).¹ Observers were sent individually to classrooms of CUTE and Comparison group students, and instructed to make one tally approximately every three seconds for a minimum of 20 minutes per student teacher, providing a matrix of approximately 400 tallies--sufficient for inference about verbal communication.²

¹Ned A. Flanders, Interaction Analysis in the Classroom: (Ann Arbor: University of Michigan, 1964), p. 15.

²Ned A. Flanders, "Interaction Analysis and Inservice Training," Journal of Experimental Education, Fall, 1968, p. 127

Each observation was of one teaching unit or activity. The sums of the matrix for each student teacher were entered into a summary matrix in order to achieve group data for comparison.

The data were then entered into a matrix two at a time. The first number of each pair indicated the row of the matrix, the second the column. The first pair consisted of the first two numbers. The second pair consisted of the second and third numbers, and thus overlapped the first pair. All tallies were entered into the matrix as a series of overlapping pairs. Once the matrix was constructed the percentages and ratios were calculated from column totals. In this study the sums of the matrix for each teacher is entered into a summary matrix in order to achieve group data for comparison.

TABLE 7
SCOTT INTER-OBSERVER COEFFICIENTS
KANSAS CITY, MISSOURI

<u>Observer</u>	<u>Coefficient</u>
1	.89
2	.89
3	.90
4	.90

TABLE 8
SCOTT INTER-OBSERVER COEFFICIENTS
OKLAHOMA CITY, OKLAHOMA

<u>Observer</u>	<u>Coefficient</u>
1	.82
2	.82
3	.80
4	.80

TABLE 9
SCOTT INTRA-OBSERVER COEFFICIENTS
WICHITA, KANSAS

<u>Observer</u>	<u>Coefficients</u>
1	.69*
2	.38
3	.72*
4	.77
5	.85
6	.77
7	.71*

* received additional training

TABLE 10

McREL INTERACTION ANALYSIS
PERCENTAGE OF TEACHER TALK

	N	Time 1	Time 2	Time 3
Kansas City 5	16	60.28	53.92	56.11
Comparison	4	---	---	59.61
Wichita 2	37	58.91	47.92	43.49
Comparison	22	---	---	46.74
Oklahoma City 2	22	55.47	52.15	52.72
Comparison	--	---	---	---

TABLE 11

McREL INTERACTION ANALYSIS
PERCENTAGE OF STUDENT TALK

	N	Time 1	Time 2	Time 3
Kansas City 5	16	24.42	32.05	32.06
Comparison	4	---	---	27.07
Wichita 2	37	18.72	24.80	26.10
Comparison	22	---	---	30.68
Oklahoma City 2	22	28.97	31.11	27.84
Comparison	--	---	---	---

TABLE 12
McREL INTERACTION ANALYSIS
REGULAR I/D RATIO

	N	Time 1	Time 2	Time 3
Kansas City 5	16	0.359	0.382	0.256
Comparison	4	---	---	0.409
Wichita 2	37	0.379	0.512	0.442
Comparison	22	---	---	0.417
Oklahoma City 2	22	0.325	0.442	0.328
Comparison	--	---	---	---

TABLE 13
McREL INTERACTION ANALYSIS
REVISED I/D RATIO

	N	Time 1	Time 2	Time 3
Kansas City 5	16	0.529	0.490	0.282
Comparison	4	---	---	0.289
Wichita 2	37	0.555	0.587	0.472
Comparison	22	---	---	0.561
Oklahoma City 2	22	0.641	0.579	0.430
Comparison	--	---	---	---

TABLE 14

McREL INTERACTION ANALYSIS
PERCENTAGE OF CATEGORY 9

	N	Time 1	Time 2	Time 3
Kansas City 5	16	3.72	8.45	6.63
Comparison	4	---	---	0.52
Wichita 2	37	4.11	5.05	8.22
Comparison	22	---	---	8.09
Oklahoma City 2	28	16.97	12.68	10.16
Comparison	--	---	---	---

TABLE 15

McREL INTERACTION ANALYSIS
PERCENTAGE OF CATEGORY 10

	N	Time 1	Time 2	Time 3
Kansas City 5	16	13.84	12.31	9.17
Comparison	4	---	---	11.06
Wichita 2	37	21.30	26.08	28.07
Comparison	22	---	---	19.86
Oklahoma City 2	22	13.68	16.03	18.85
Comparison	--	---	---	---

TABLE 16

McREL INTERACTION ANALYSIS
PERCENTAGE OF CATEGORY 11

	N	Time 1	Time 2	Time 3
Kansas City 5	16	0.10	0.19	0.29
Comparison	4	---	---	0.23
Wichita 2	37	0.27	0.35	1.07
Comparison	22	---	---	0.29
Oklahoma City 2	22	0.08	0.10	0.04
Comparison	--	---	---	---

TABLE 17

McREL INTERACTION ANALYSIS
PERCENTAGE OF CATEGORY 12

	N	Time 1	Time 2	Time 3
Kansas City 5	16	1.36	1.53	2.38
Comparison	4	---	---	2.04
Wichita 2	37	0.81	0.86	1.27
Comparison	22	---	---	2.44
Oklahoma City 2	22	1.80	0.61	0.56
Comparison	--	---	---	---

The Rokeach D-Scale

The Rokeach D-Scale, Form E, is a 40 item Likert scale to measure individual differences in openness or closedness of belief systems. It is assumed that a person's beliefs are organized into two independent parts: a belief system and disbelief system. Rokeach defines a belief system as the psychological system (not necessarily logical) which represents all the beliefs, sets, expectancies, or hypotheses, conscious and unconscious, that a person at a given time accepts as true of the world in which he lives. The disbelief system is composed of a series of subsystems. It contains all the disbeliefs, sets, expectancies, conscious and unconscious, that a person at a given time rejects as false to one degree or another.

Finally, a belief-disbelief system has a dimension of time. A person's belief-disbelief system includes a perspective about the past, present, and future, and the manner in which they are related to each other. The perspective may be broad or narrow.

The openness or closedness of a belief-disbelief system may be determined by the extent to which "the person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside."³

An additional assumption is made about openness and closedness:

...all belief-disbelief systems serve two powerful and conflicting sets of motives at the same time; the need for a cognitive framework to know and to understand and the need to ward off threatening aspects of reality. To

³Milton Rokeach, *The Open and Closed Mind* (New York: Basic Books, 1960), p. 57.

the extent that the cognitive need to know is predominant and the need to ward off threat absent, open systems should result....but if need to ward off threat becomes stronger, the cognitive need to know should become weaker resulting in more closed belief system.⁴

The 40 items of the scale are distributed among the three aspects or dimensions of the definition: the belief-disbelief dimension, the central-peripheral dimension, and the time perspective dimension.

Each item has six alternatives ranging from "I agree very much" to "I disagree very much" with weights being from +3 to -3. The scoring range for an individual item is from 1-7 since the constant 4 is added to the weight of the selected alternatives. The total score for the test is the summation of the item scores. The higher the score the more closed is the person's belief system.

TABLE 18

THE ROKEACH D-SCALE

Means, Standard-deviation, and Numbers of Student Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	132.19	19.98	16	142.12	19.29	16	146.06	18.96
COMPARISON	--	--	--	--	--	--	15	137.47	23.45
OKLAHOMA CITY 2	22	159.18	20.98	22	148.68	26.95	22	146.55	22.78
COMPARISON	--	--	--						
WICHITA 2	37	142.27	27.66	37	142.78	27.01	36	142.83	29.35
COMPARISON	--	--	--				27	153.59	25.07

⁴Ibid., p. 68.

Teaching Situation Reaction Test

The TSRT is a paper-pencil test which poses a general teaching situation. Forty-four specific questions concerning possible situations facing a teacher are then asked including: course planning, handling restlessness and inattention, handling conflicts between two students, handling conflict between a student and the class, working with shy students, etc. For each of the 44 items, there are four options. The examinee is asked to rank the four options for each question, indicating his first, second, third, and fourth choice. An example of a specific item and the four options illustrates the testing procedure:

You have the entire summer vacation to plan for your class.

1. When you begin planning your work you would:
 - a. Ask your helping teacher what information he has about your assignment.
 - b. Examine the facilities and materials available to you and determine how these might be used with members of your class.
 - c. Read through various publications describing the curriculum and draw lesson plan ideas from them.
 - d. Visit the school and community and incorporate what you learn into your plan.

Responses are scored according to a key following procedures suggested by Remmers, Gage, and Rummel. The test scores may range from 0 to 880; 880 indicates complete agreement.⁵

Studies reported by the test authors ascertaining test measures suggest that the test will predict student-teaching grades as well as teacher

⁵H. H. Remmers, N. L. Gage, and J. F. Rummel, A Practical Introduction to Measurement and Evaluation (New York: Harper and Row, 1965, p. 261.)

performance. These, the author states, include subject-matter competence, teacher-pupil relationships, an ability to manage classroom situations and human relation skills as measured on the Barrett-Lennard Relationship Inventory.⁶

TABLE 19

TEACHING SITUATION REACTION TEST

Means, Standard-deviation, and Numbers of Student Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	513.87	40.84	16	523.13	49.50	16	512.50	36.41
COMPARISON	--	--	--				15	517.87	34.21
OKLAHOMA CITY 2	22	519.64	50.35	22	520.91	40.41	22	514.73	41.86
COMPARISON	--	--	--				--	--	--
WICHITA 2	37	528.89	33.66	37	539.41	30.49	37	521.68	41.43
COMPARISON	--	--	--				28	519.64	55.72

⁶Jones K. Duncan and John B. Hough, "Technical Review of the TSRT," Unpublished paper, (Ohio State University, 1966). p. 6.

The Semantic Differential

The Semantic Differential is a data gathering device which is widely used and has been generalized in a wide range of research application. The usual procedure is to choose a series of concepts which are relevant and represent the subject or topic to which one wishes to ascribe meaning. For each concept, bi-polar adjectives are selected and constitute scales. Each scale has seven-step intervals between its polar adjectives. The concept appears at the top of one sheet of paper with the adjectival scales listed below. The format is as follows:

My Boss

good _____: _____: _____: _____: _____: _____: _____: bad
unfair _____: _____: _____: _____: _____: _____: _____: fair

The nine concepts used by McREL include: teacher, principals, pupils, grading, lecturing, class discussion, public schools, my teaching, and volunteers. These concepts are formatted as described below following the suggestions of Kerlinger.⁷

For each of the concepts there are 12 seven-step scales. The 12 scales yield three scores which are called the evaluative, potency, and activity. Every third scale is selected for one of the derived scores; thus, four scales contribute to each of the scores.

Scales are scored by attaching the values of 1-7 to each of the steps, with 7 assigned to the positive end of the scale. Directions to

⁷Fred N. Kerlinger, *Foundations of Behavioral Research*, (New York: Holt, Rinehart and Winston, 1966), p. 571.

the scales are reversed on every other item in order to avoid set responses.

To interpret the scores, the dictionary definition is ascribed to each of the three derived scores. Then using the magnitude of the score, one could estimate relative degrees of meaning that the respondents attach to various concepts. For example, an E score of 28 would indicate that the respondent sees the concept as having a high value; whereas an A score of 4 would be interpreted to mean the respondent sees the concept as being inactive. Score interpretations are relative to other scores on the concepts and to scores of other respondents.

TABLE 20

SEMANTIC DIFFERENTIAL
TEACHERS EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	22.62	3.14	16	22.25	4.95	16	23.19	3.75
COMPARISON	--	--	--				15	22.07	4.13
OKLAHOMA CITY 2	22	23.59	3.90	22	24.14	3.33	22	23.48	3.64
COMPARISON	--	--	--				--	--	--
WICHITA 2	37	22.73	3.34	37	19.86	5.62	36	20.75	4.51
COMPARISON	--	--	--				28	23.57	3.05

TABLE 21

SEMANTIC DIFFERENTIAL
TEACHERS POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	18.44	2.61	16	19.37	2.13	16	19.44	2.42
COMPARISON	--	---	--				15	18.07	2.60
OKLAHOMA CITY 2	22	17.77	2.65	22	18.95	3.71	22	19.96	3.84
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	18.43	2.72	37	18.73	3.49	36	19.31	3.15
COMPARISON	--	---	--				28	18.29	2.48

TABLE 22

SEMANTIC DIFFERENTIAL
TEACHERS ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.06	2.98	16	19.81	4.46	16	21.31	2.63
COMPARISON	--	---	--				15	20.47	4.58
OKLAHOMA CITY 2	22	19.50	3.61	22	21.32	3.68	22	21.52	3.69
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	19.51	4.42	37	17.35	6.06	36	18.72	5.27
COMPARISON	--	---	--				28	20.68	3.69

TABLE 23

SEMANTIC DIFFERENTIAL
PRINCIPALS EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	21.81	2.64	16	17.94	5.20	16	21.12	4.10
COMPARISON	--	---	--				15	21.40	4.47
OKLAHOMA CITY 2	22	21.86	4.60	22	22.86	4.22	22	22.87	4.55
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	20.76	3.89	37	19.84	4.08	36	20.78	4.11
COMPARISON	--	---	--				28	22.61	3.84

TABLE 24

SEMANTIC DIFFERENTIAL
PRINCIPALS POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.81	2.07	16	20.50	3.69	16	21.31	3.36
COMPARISON	--	---	--				15	20.80	3.88
OKLAHOMA CITY 2	22	19.32	3.73	22	21.14	3.63	22	19.87	3.70
COMPARISON	--	---	--						
WICHITA 2	37	21.27	2.68	37	20.57	3.48	36	21.28	3.49
COMPARISON	--	---	--				28	20.75	3.70

TABLE 25

SEMANTIC DIFFERENTIAL
PRINCIPALS ACTIVITYMeans, Standard Deviations and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5 COMPARISON	16	21.00	3.12	16	17.62	4.60	16	20.19	4.69
							15	20.07	4.04
OKLAHOMA CITY 2 COMPARISON	22	19.27	5.08	22	21.64	4.86	22	21.39	4.64
	--	---	--				--	---	--
WICHITA 2 COMPARISON	37	19.73	4.11	37	18.59	5.07	36	19.19	4.65
	--	---	--				28	21.07	4.91

TABLE 26

SEMANTIC DIFFERENTIAL
PUPILS EVALUATIONMeans, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5 COMPARISON	16	22.31	1.82	16	23.50	2.90	16	23.69	2.91
	--	---	--				15	23.00	3.42
OKLAHOMA CITY 2 COMPARISON	22	23.59	3.02	22	24.55	2.20	22	24.09	3.13
	--	---	--				--	---	--
WICHITA 2 COMPARISON	37	23.24	2.97	37	23.78	3.37	36	24.47	2.91
	--	---	--				28	23.89	2.74

TABLE 27

SEMANTIC DIFFERENTIAL
PUPILS POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	16.81	2.83	16	17.81	2.51	16	17.06	2.72
COMPARISON	--	---	--				15	15.27	4.38
OKLAHOMA CITY 2	22	14.68	3.50	22	16.82	3.58	22	17.17	3.16
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	16.70	3.32	37	17.76	4.12	36	18.03	3.81
COMPARISON	--	---	--				28	16.57	3.16

TABLE 28

SEMANTIC DIFFERENTIAL
PUPILS ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.75	2.96	16	22.06	2.98	16	21.81	3.85
COMPARISON	--	---	--				15	19.67	3.64
OKLAHOMA CITY 2	22	21.59	3.42	22	22.27	4.28	22	22.17	5.15
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	21.54	3.22	37	22.46	4.43	36	23.06	3.46
COMPARISON	--	---	--				28	20.86	3.29

TABLE 29

SEMANTIC DIFFERENTIAL
GRADING EVALUATIONMeans, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	13.81	5.17	16	14.12	6.32	16	11.75	3.82
COMPARISON	--	---	--				15	13.53	5.01
OKLAHOMA CITY 2	22	16.59	7.31	22	11.09	6.55	22	12.83	6.27
COMPARISON	--	---	--						
WICHITA 2	37	12.14	5.21	37	8.24	3.83	36	10.58	4.40
COMPARISON	--	---	--				28	14.61	5.78

TABLE 30

SEMANTIC DIFFERENTIAL
GRADING POTENCYMeans, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	16.06	3.38	16	16.69	3.40	16	16.25	2.05
COMPARISON	--	---	--				15	18.00	3.05
OKLAHOMA CITY 2	22	17.09	4.30	22	17.73	3.68	22	16.87	3.15
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	17.22	3.49	37	17.27	4.34	36	17.06	3.54
COMPARISON	--	---	--				28	17.18	3.37

TABLE 31

SEMANTIC DIFFERENTIAL
GRADING ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	14.19	3.85	16	13.25	5.73	16	11.06	3.23
COMPARISON	--	---	--				15	14.53	4.02
OKLAHOMA CITY 2	22	15.73	6.07	22	11.45	5.23	22	13.09	5.59
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	12.30	4.55	37	9.51	4.42	36	11.25	4.76
COMPARISON	--	---	--				28	14.96	4.41

TABLE 32

SEMANTIC DIFFERENTIAL
LECTURING EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	18.19	5.29	16	17.50	4.05	16	17.19	3.97
COMPARISON	--	---	--				15	15.33	4.61
OKLAHOMA CITY 2	22	18.36	6.31	22	16.27	4.98	22	18.26	4.43
COMPARISON	--	---	--						
WICHITA 2	37	16.59	5.48	37	12.19	4.22	36	13.08	5.08
COMPARISON	--	---	--				28	18.32	5.84

TABLE 33

SEMANTIC DIFFERENTIAL
LECTURING POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	18.25	2.84	16	17.25	.93	16	17.69	2.09
COMPARISON	--	---	--				15	17.73	2.96
OKLAHOMA CITY 2	22	18.14	3.06	22	17.95	2.95	22	17.57	3.04
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	18.32	2.91	37	16.22	3.43	36	16.97	2.94
COMPARISON	--	---	--				28	18.61	3.21

TABLE 34

SEMANTIC DIFFERENTIAL
LECTURING ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	15.44	5.37	16	15.37	4.22	16	15.06	4.12
COMPARISON	--	---	--				15	13.20	4.63
OKLAHOMA CITY 2	22	16.23	5.63	22	14.18	5.32	22	15.13	4.68
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	14.81	6.20	37	10.27	5.09	36	11.50	5.17
COMPARISON	--	---	--				28	15.25	5.90

TABLE 35

SEMANTIC DIFFERENTIAL
CLASS DISCUSSION EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	25.31	2.36	16	25.25	2.44	16	24.62	3.01
COMPARISON	--	---	--				15	24.47	3.40
OKLAHOMA CITY 2	22	25.41	3.00	22	25.82	2.40	22	24.91	2.52
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	25.16	1.95	37	25.65	2.99	36	25.00	2.79
COMPARISON	--	---	--				28	24.14	3.72

TABLE 36

SEMANTIC DIFFERENTIAL
CLASS DISCUSSION POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.94	3.80	16	19.50	4.53	16	20.94	3.36
COMPARISON	--	---	--				15	19.67	3.04
OKLAHOMA CITY 2	22	19.09	4.71	22	19.55	3.92	22	20.04	3.48
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	19.59	4.13	37	19.68	4.16	36	19.39	3.16
COMPARISON	--	---	--				28	19.43	3.26

TABLE 37

SEMANTIC DIFFERENTIAL
CLASS DISCUSSION ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	22.81	3.53	16	23.19	2.86	16	24.12	3.01
COMPARISON	--	---	--				15	23.33	3.48
OKLAHOMA CITY 2	22	22.00	4.05	22	23.77	3.78	22	23.17	3.28
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	23.49	2.84	37	24.65	3.09	36	23.50	3.15
COMPARISON	--	---	--				28	22.79	3.57

TABLE 38

SEMANTIC DIFFERENTIAL
PUBLIC SCHOOLS EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.69	3.22	16	17.44	4.99	16	18.62	3.72
COMPARISON	--	---	--				15	21.20	5.36
OKLAHOMA CITY 2	22	22.86	3.81	22	21.14	4.04	22	19.65	5.76
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	21.43	3.97	37	18.49	4.69	36	20.08	4.44
COMPARISON	--	---	--				28	22.07	3.66

TABLE 39

SEMANTIC DIFFERENTIAL
PUBLIC SCHOOLS POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	18.44	3.20	16	17.31	3.22	16	18.56	2.50
COMPARISON	--	---	--				15	21.20	4.00
OKLAHOMA CITY 2	22	19.32	3.67	22	18.86	3.87	22	18.30	3.67
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	18.95	2.90	37	19.05	3.19	36	19.28	3.61
COMPARISON	--	---	--				28	19.75	2.98

TABLE 40

SEMANTIC DIFFERENTIAL
PUBLIC SCHOOLS ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	18.00	4.16	16	13.94	4.55	16	16.12	3.77
COMPARISON	--	---	--				15	17.93	5.96
OKLAHOMA CITY 2	22	19.27	4.20	22	17.82	4.17	22	17.00	5.05
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	17.76	5.04	37	15.51	5.20	36	16.92	5.60
COMPARISON	--	---	--				28	19.25	3.90

TABLE 41

SEMANTIC DIFFERENTIAL
MY TEACHING EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	21.81	4.21	16	22.31	3.50	16	24.06	2.72
COMPARISON	--	---	--				15	23.87	3.18
OKLAHOMA CITY 2	22	23.41	3.43	22	22.91	4.84	22	23.17	3.90
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	23.24	3.03	37	22.76	3.27	36	23.78	3.24
COMPARISON	--	---	--				28	24.07	2.93

TABLE 42

SEMANTIC DIFFERENTIAL
MY TEACHING POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	17.31	2.70	16	16.75	2.70	16	19.50	3.27
COMPARISON	--	---	--				15	17.60	3.72
OKLAHOMA CITY 2	22	18.32	3.24	22	17.18	4.43	22	18.91	3.84
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	18.32	3.72	37	17.62	3.33	36	18.03	3.53
COMPARISON	--	---	--				28	18.29	3.89

TABLE 43

SEMANTIC DIFFERENTIAL
MY TEACHING ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	20.56	2.68	16	20.38	2.82	16	22.06	2.95
COMPARISON	--	---	--				15	20.73	3.83
OKLAHOMA CITY 2	22	20.59	3.23	22	20.73	3.64	22	21.35	3.08
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	21.03	3.31	37	21.05	3.70	36	22.11	3.64
COMPARISON	--	---	--				28	21.61	4.00

TABLE 44

SEMANTIC DIFFERENTIAL
VOLUNTEERS EVALUATION

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	21.56	2.78	16	22.75	3.64	16	22.81	3.83
COMPARISON	--	---	--				15	23.67	5.09
OKLAHOMA CITY 2	22	24.55	2.76	22	23.91	2.69	22	20.96	4.92
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	24.24	3.06	37	23.57	4.27	36	23.69	3.50
COMPARISON	--	---	--				28	23.57	3.20

TABLE 45

SEMANTIC DIFFERENTIAL
VOLUNTEERS POTENCY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	19.06	2.84	16	16.75	2.49	16	18.12	3.67
COMPARISON	--	---	--				15	16.73	4.68
OKLAHOMA CITY 2	22	17.86	3.75	22	17.95	3.36	22	17.30	3.71
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	18.78	3.85	37	18.49	4.03	38	18.42	3.86
COMPARISON	--	---	--				28	18.11	3.64

TABLE 46

SEMANTIC DIFFERENTIAL
VOLUNTEERS ACTIVITY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	21.75	3.55	16	21.25	2.82	16	20.31	4.05
COMPARISON	--	---	--				15	21.40	5.57
OKLAHOMA CITY 2	22	21.86	3.41	22	20.95	2.10	22	19.43	4.35
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	22.22	2.66	37	22.00	3.67	36	21.42	3.63
COMPARISON	--	---	--				28	21.82	2.84

Description of the Minnesota Teacher Attitude Inventory

The MTAI is well-known and widely-used instrument designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships and indirectly how well satisfied he will be with teaching as a vocation. It is recommended by the authors as suitable for measuring the effectiveness of a teacher-education program.

The MTAI is a Likert scale with 150 five-option items. The options range from "strongly agree" to "strongly disagree." Whereas, there are no "right" or "wrong" answers. The test is scored so that item responses keyed "correct" are given a value of plus one and item responses keyed "incorrect" are given a value of minus one. Scores may range from -150 to +150. However, in order to avoid negative scores, one hundred has been added to all scores reported in this study.

TABLE 47

MINNESOTA TEACHER ATTITUDE INVENTORY

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	136.06	19.20	16	152.19	21.66	16	143.12	25.49
COMPARISON	--	---	--				15	152.47	29.56
OKLAHOMA CITY 2	22	145.64	31.73	22	160.18	26.93	22	146.73	31.69
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	145.65	28.87	37	165.86	27.70	37	163.54	23.29
COMPARISON	--	---	--				28	146.64	28.13

THE CULTURAL ATTITUDE INVENTORY

The CAI is a 50-item Likert-type attitude scale developed and revised by Dorothy Skeel.⁸ Item responses are as follows: strongly agree, agree, undecided, disagree, and strongly disagree. The scoring procedure is to assign five for the correct response (strongly agree or strongly disagree depending on the direction of question), four for the next nearly correct response, etc. Total scores may range from 50 to 250 with a higher score indicating the more desirable attitude and greater knowledge.

For the purpose of this evaluation, the scale was further divided into two subscales: the knowledge subscale with 19 items and the attitude subscale with 28 items.

Skeel reports the reliability of the original instrument to be .46 (K-R), N=190.⁹ Her study supports the theory that the CAI can be useful in identifying student teachers who should be able to work effectively with culturally-deprived children.¹⁰

The author reports 183.68 as the mean for 119 elementary education majors; the standard deviation, 9.78.

⁸Dorothy J. Skeel, "Determining the Compatibility of Student Teachers for Culturally Deprived Schools by Means of a Cultural Attitude Inventory," (Unpublished doctoral dissertation, Pennsylvania State University, 1965).

⁹Ibid., p. 52.

¹⁰Ibid., p. 74.

TABLE 48

CULTURAL ATTITUDE INVENTORY
TOPIC-K SCORES

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	73.06	6.44	16	78.38	4.56	16	77.69	5.76
COMPARISON	--	---	--				15	73.53	6.03
OKLAHOMA CITY 2	22	79.09	10.30	22	78.64	5.66	22	78.36	6.15
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	74.38	6.15	37	78.41	5.16	37	78.03	5.10
COMPARISON	--	---	--				28	75.50	5.31

TABLE 49

CULTURAL ATTITUDE INVENTORY
TOPIC-A SCORES

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	106.06	6.08	16	111.62	4.36	16	107.25	7.63
COMPARISON	--	---	--				15	110.87	7.25
OKLAHOMA CITY 2	22	108.55	10.45	22	112.09	6.25	22	106.55	7.94
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	108.84	6.43	37	115.62	5.82	37	113.62	7.28
COMPARISON	--	---	--				28	108.46	8.13

TABLE 50

CULTURAL ATTITUDE INVENTORY
TOPIC-TOTAL SCORES

Means, Standard Deviations, and Numbers of Student
Teachers for Each Semester and Each Testing.

	Time 1			Time 2			Time 3		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
CUTE 5	16	191.87	11.99	16	201.37	9.62	16	191.19	23.08
COMPARISON	--	---	--				15	196.60	12.03
OKLAHOMA CITY 2	22	199.91	11.86	22	203.95	10.60	22	197.68	12.33
COMPARISON	--	---	--				--	---	--
WICHITA 2	37	195.54	9.78	37	207.16	10.40	37	204.59	11.18
COMPARISON	--	---	--				28	196.61	11.45

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